Fort Vancouver, Artillery Stables (Old Mule Barn)
Fort Vancouver
Vancouver
Clark County
Washington

HABS No. WA-41C

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Buildings Survey
National Park Service
Western Region
Department of the Interior
San Francisco, California 94102

#2383J

HABS
WASH
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1H-

HISTORIC AMERICAN BUILDING SURVEY

FORT VANCOUVER,
ARTILLERY STABLES (OLD MULE BARN) HABS No.WA- 41C

Location

Vancouver, Washington - Oregon 15 min Quadrangle
Universal Transverse Mercator Coordinates:
Zone 10
E 526,122
N 5,052,290

At the time of its construction, the US Army named this structure "Artillery Stables." However, over the years it has been identified as: Building F, Building 138, Building 689, Infantry Stables, Mule Barn, and Quartermaster's Warehouse. Its most common name since 1939 is "Old Mule Barn."

The Artillery Stables (Old Mule Barn) is situated on 4.12 acres of land occupied by the Federal Highway Administration (FHWA), Western Direct Federal Division (WDFD) and is completely enclosed by the City of Vancouver, Clark County, Washington. It is more directly bounded by military housing to the north; East Fifth Street on the south; and between Interstate I-5 and McLoughlin Road. This property is nearly coincident with the St. James Mission, an archaeologic site considered eligible for the National Register of Historic Places. (See Schematic Site Plan, page 10.)

The FHWA/WDFD Complex contains two buildings. Building one is the former US Army Artillery Stable. Building two is a comparatively modern, split-level brick structure. Parking lots and graveled storage yards are located to the north, west, and east sides of these buildings. To the south, landscaped lawns, shrubbery, and an employee picnic area extend from the buildings to the sidewalk of East Fifth Street.

This site is within the Vancouver Central Park Zone, a special zone established to preserve the historic and park-like characteristics of a larger historic and cultural area.

Present Owner and Occupant

Federal Highway Administration
Western Direct Federal Division
610 East Fifth Street
Vancouver, Washington 98661-3893
Commercial 206-696-7782 - FTS 422-7782

Present Building Use

Intermittent materials testing plus long-term storage of miscellaneous equipment (including crawler-type personnel carriers and other motorized equipment), machine shop tools, and miscellaneous paraphernalia.

Significance

The Artillery Stable is locally significant for its historical associations with military operations at Fort Vancouver during World War I and for its architectural importance as a rare extant example of a building type once common on Army installations in the region. This structure provides a scale of military planning and its relationship to local community development.

Part I. Historical Information - Artillery Stables

A. Physical History

1. Completion Date

Listed in Vancouver Army Barracks' records as October 31, 1910. No dates given for beginning construction or of a dedication ceremony.

2. Architect

Unknown, believed to be of a standard design used extensively by the Army.

3. Original Owner

The U.S. Government - U.S. Army

Present Owner

The Federal Highway Administration FHWA/WDFD. This building has been continuously owned and occupied by the Federal Government.

4. Builder, Contractor, Suppliers

All unknown

5. Original Plans

Lost

6. Alterations

Circa 1940. To convert the building for long-term storage of miscellaneous materials, rougnly 67 percent of the original brick flooring was replaced with concrete, animal stalls and interior post spacings were changed. Trusses were created to compensate for the posts removed and some doors were closed or widened to accommodate motorized project vehicles.

In the remaining one-third of the barn, the original brick flooring was left in-situ. However, at a later date a latrine was installed in the northwest corner of the building, which further reduced the amount of original flooring. Today, roughly 10 percent of the original brick floor remains and a portion of that is covered by a concrete slab. (See page 13.)

The portion of this structure not included in the laboratory proposal will continue to be used for long-term storage. All of the remaining original brick flooring will be retained in its present condition.

B. Historical Events and Persons Connected with the Structure

From its completion in 1910 to about 1939, the Artillery Stables were continually used. During World War I the stable probably received its heaviest use. For instance, in 1917 over 1,100 head of green horses were brought in and broken in 30 days by 30 soldiers. These, and other animals also broken in Vancouver, represent an exceptional contribution by a small compliment of soldiers to providing the 1,000,000 horses and mules used by the Army during World War I.

Fort Vancouver history is easily traced to the early Hudson's Bay Company and includes many colorful pioneers. Typical among the famous people who might have known the Old Mule Barn are Generals George C. Marshall, Omar Bradley, and Chas Martin. General Martin became Governor of Oregon in 1934. Omar Bradley became a brilliant tactician against the Third Reich in World War II. General George C. Marshall commanded Fort Vancouver from 1936 to 1939, and served as Chief of Staff to President Roosevelt and Secretary of State to President Truman.

Part II. Architectural Information

A. General Statement

1. Architectural Character

The intent of this structure, erected by the US Army prior to World War I, was strictly utilitarian; a stable for horses and mules. Abundant window and door openings, ventilator screens, floor drains, and nay lofts provided sanitary conditions for the care, training, and feeding of the animals. Though the stables were spacious, little effort to incorporate decorative features was included in the architectural design. Except for a brick segmented arch used above most exterior door and window openings and curving the ends of all rafters, there are no decorative features to the structure. It is an imposing structure and reflects the craftsmanship of 1910.

2. Condition of Fabric

All exterior walls were sandblasted at some period and the mortar is generally deteriorated. Other exterior alterations include the enlargement of the door openings on the west, north, and south elevations to accommodate car widths. On the north, these openings are still fitted with wooden doors. On the west, sliding metal garage doors have been attached to the frame. On the south, a new central opening with metal sliding doors has been installed. The flanking openings have been bricked in and a

metal door has been installed to the southeasterly sealed opening. On the east elevation, the original arched opening remains, but also has been bricked in. All of these sealed door openings are faced with concrete block on the interior side. On the north end, the tall window openings and loft door have been sealed with plywood. The original tall windows at the north end of the east and west elevation remain uncovered and are intact.

The roof surfaces, originally slate, are now covered with slab composition roofing. The windows on the exterior are in good condition. Most retain their lights, and frames have not appreciably deteriorated. Many of the alterations to the door openings are reversible. Refurbishing exterior wooden surfaces will include replacing the few cracked or missing window lights.

B. Description of Exterior

Some of the previous remodeling can and will be returned to a more original appearance during the renovation of the barn to a materials testing laboratory. Many of the revisions to be performed will be reversible and the finished project will retain the original 1910 character of the building's exterior.

1. Overall Dimensions

235 x 67 feet containing 18,084 sq. ft. (including loft)

2. Foundations

Concrete

3. Walls

Brick

4. Structural Framing

The original structural system was elaborate. Paired (for interior columns) and single (for peripheral columns) 3 by 12's, oriented north/south, were attached to all structural columns at the 10 foot level. Above these, and oriented east/west were paired 3 by 12's which spanned the entire width of the building, tying in the side aisle roof support system of queen post/purlin/strut which was oriented north/south. Additional paired 3 by 12's and diagonal bracing supported the base of tne monitor and traditional king post/strut/tie beam configuration supported the monitor roof.

5. Porches, Stoops, Chimneys, Basements

None

6. Openings - Doors and Windows

The north elevation has four window openings, plus two arched doorways and a large arched doorway in the upper wall which accessed the hay loft. The northeastern and northwestern- most windows lit the already mentioned small service rooms. The two centrally-located windows illuminated the saddle and harness room, which occupied a 52'1" by 19'8" space below the hay loft. The south elevation was the simplest, presenting only two arched openings which were identical to those on the north elevation and which corresponded to the internal circulation pattern.

The taller windows on the northern end of the east and west elevations corresponded to a series of four interior rooms measuring 10'7" by 9'8" each and situated against the east and west elevation walls. These were used for two storerooms, a dispensary, and officers' saddle room.

On the east and west elevations, large arched openings were located slightly north of center between symmetrically positioned, arched, recessed window openings with concrete sills. With the exception of the two northern-most windows on these two elevations, which were full length six-over-six, double-hung sash windows, the openings were composed of six lights and were set into horizontal frames located on the interior wall. These windows were designed to illuminate and ventilate two stalls.

The monitor elevations were composed of alternating sets of paired nine-light windows and horizontally-louvered vents, both in wood frames which were set into walls composed of channel siding beneath slate shingles.

7. Roof

Rafters with curved, sawn ends on both the full length monitor and main roof add interest to the roof line. The roof and the vertical faces of the monitor were originally shingled with slate.

C. Description of the Interior

1. Floor Plans

a. One drawing, dated December 6, 1939, indicates the configuration of animal stalls and door and window openings. It is the only drawing of this building found. There are some obvious errors, for example, the stairway to the loft was not constructed as shown and there is no evidence of an enclosed room on the loft. (See page 12.)

b. FHWA/WDFD, in January 1985, revised the drawing to indicate the changes since 1939. All changes are noted by a figure 1 inside a triangle. Note the changes in interior posts. The

section has been redrawn and labeled as a Half Section. Correctly scaled, it provides a better feeling of the stable. The loft and access stairway are corrected. The latrine and sewer manhole are added as is the floor drainage system. (See page 13.)

2. Original Configuration

Designed to house 138 animals, the interior disposition of the stalls and service areas was cross-axial and essentially H-shaped. The majority of the stalls (96), were placed in the southern half of the building. The remaining 42 were fitted around the service room spaces in the north end. Stalls were placed singly along the east and west walls and were in double rows down the middle of the building. Two stalls, each measuring approximately 4'5" by 9'10" were placed between the 5-1/4" square peripheral structural columns. To support the monitor, the interior columns were approximately 7-1/4" square. Both originally had chamfered corners. The horses or mules were separated by partitions approximately 5 feet in height. The floor was brick and slightly concaved towards the shallow channel drainage system.

Roughly 10 percent of the original flooring remains in the northerly end of the building. Other than the maintenance work required, this portion of the building will remain in its present condition.

The balance of the floor was replaced with concrete when the barn was used for motorized vehicles. It is this portion of the barn that will be renovated to form a modern materials testing laboratory.

There is one interior wooden stairway to a loft in the northern end. No special interior decorative treatments or hardware were used.

Walls are brick and the ceilings are open to allow full movement of the air through the windows and ventilator screens in the monitor.

3. Mechanical/Electrical

An undated document in the Vancouver Army Barracks' archives notes 110 volt, 15 amp, single phase electric service in the building. This document also states the building as unheated with no gas, steam, or water but that connections were in place for water and sewer.

It is unclear at what time water and sewer service was added, it could be original or added later. So far as we can determine, no water or sewer connections were made at the time of original construction.

Recently, we found that a latrine was installed in the northwest corner of the building and two drains with floor inlet grates run longitudinally through the length of the building. Whether installed with the original construction or at a later date, the effect is the same, the combination of sanitary and floor drain systems has probably disturbed most, but not necessarily all, of the St. James Mission Archaeologic Site resources below the floor of the Old Mule Barn.

0. Site

1. Natural

The WDFD property on which the Old Mule Barn is located is gently sloping land north of the Columbia River, east of Interstate Highway I-5 in the Vancouver Barracks area. This is immediately east of the City of Vancouver Central Business District (CBD) but within the City of Vancouver city limits.

The climate of the area is influenced by Pacific Ocean currents and westerly winds which account for heavy annual rainfall. Extreme hot or cold weather occurs when easterly winds bring interior extremes down the Columbia Gorge. Summer temperatures rarely exceed 100°F, and though winter temperatures of 0° to -5°F have occurred, winter extremes in the "teens" are more likely. Wind velocities are normally 8 to 10 mph with storm winds in the 50 to 60 mph occurring once or twice each winter.

On April 5, 1972, a tornado nit Vancouver destroying several buildings with a loss of six lives. This storm track was immediately east of the WDFO Complex. One or more tornados strike the northwest annually passing almost unnoticed in remote areas. There is no record of any other tornaoo striking Oregon or Washington that resulted in a loss of human life.

The land area in and about the WDFO Complex is zoned Vancouver Central Park (VCP) by the City of Vancouver. This zoning requires a review of site plans and exterior treatment before any construction permits will be issued. The Vancouver Central Park (VCP) Zone is a specially sensitive area that is rigidly controlled to insure that new construction will be compatible with the historic and park-like character of the area.

2. Historical

Research easily verifies British, French-Canadian, and American occupancy dating back to 1825. The Fort Vancouver - Columbia River area was very important to early pioneer settlement. The Columbia River provided a transportation corridor between Cascade Locks and Astoria. Fort Vancouver served as a trading center, missionary outpost, and as a staging area for wagon trains destined for other areas.

As early considerations of the boundary oetween Canada and the United States centered on the Columbia River, the military importance of Fort Vancouver was highly significant to British interests.

A more recent, but significant event, involved Pearson Airpark. On this field in 1937, three Russian aviators ended their attempt to fly via the polar route non-stop from Moscow, Russia, to San Francisco, California. Realizing tnat their fuel was too low to complete their flight, somewnere near Eugene, Oregon, they reversed course and returned to the Fort Vancouver Airfield believing it to be a military base capable of providing protection for their aircraft.

A monument to this pioneering flight was dedicated on June 20, 1975 and is located on the north side of SR 14, south of the airfield.

The National Register of Historic Places currently identifies the following properties located near the FHWA/WOFO Complex as follows:

a. Fort Vancouver, A National Historic Site In The National Park System
Designated by US Congress 06/30/61
Location of the initial Army Cantonment - 1849

b. Officers Row, US Army
Listed as a National Historic Oistrict 11/11/74
City of Vancouver received property on 9/4/84

c. Vancouver Barracks National Historic District
Determined Eligible by the Keeper 10/31/79

d. Fort Vancouver - Kanaka Village - Hudson's Bay Co./US Army
Oetermined Eligible by the Keeper 02/26/81

e. St. James Mission
Oetermined Eligible by the Keeper 03/28/85
The FHWA/WOFD Complex is nearly coincident with the boundaries of the Mission - Nothing of the Mission exists above ground. This is a subsurface archaeologic site. (See Schematic Site Plan, page 10.)

f. Artillery Stables (Old Mule Barn)
Determined Eligible by the Keeper 03/01/85
Tnis historic structure is located on the St. James Mission Archaeologic Site.

The famous historic apple tree is also a National Register property. It stands, practically isolated, near the junction of SR 14 and I-5.

Part III. Sources of Information

A. Original Architectural Drawings

None available.

B. Bibliography

Hamrick, James M., Jr., Architectural Historian
Historical and Cultural Resource Analysis on the Mule Barn (Artillery Stables) Vancouver, Washington, 27 April 1984

Thomas, Bryn
An Archaeological Assessment of the St. James Mission Property, Vancouver, Washington

Organization History Files, Vancouver Army Barracks
Building Records, Vancouver Army Barracks

MacColl, E. Kimbark
The Growth of a City, The Georgian Press, 1979

Bureau of Public Roads' Files

Thomas, Bryn and Hibbs, Charles
Vol. 1 & 2
Report of Investigations of Excavations at Kanaka Village Vancouver Barracks Washington, 1980-1981

Interview, Roy E. Tarbet, Structural Engineer, BPR, Retired

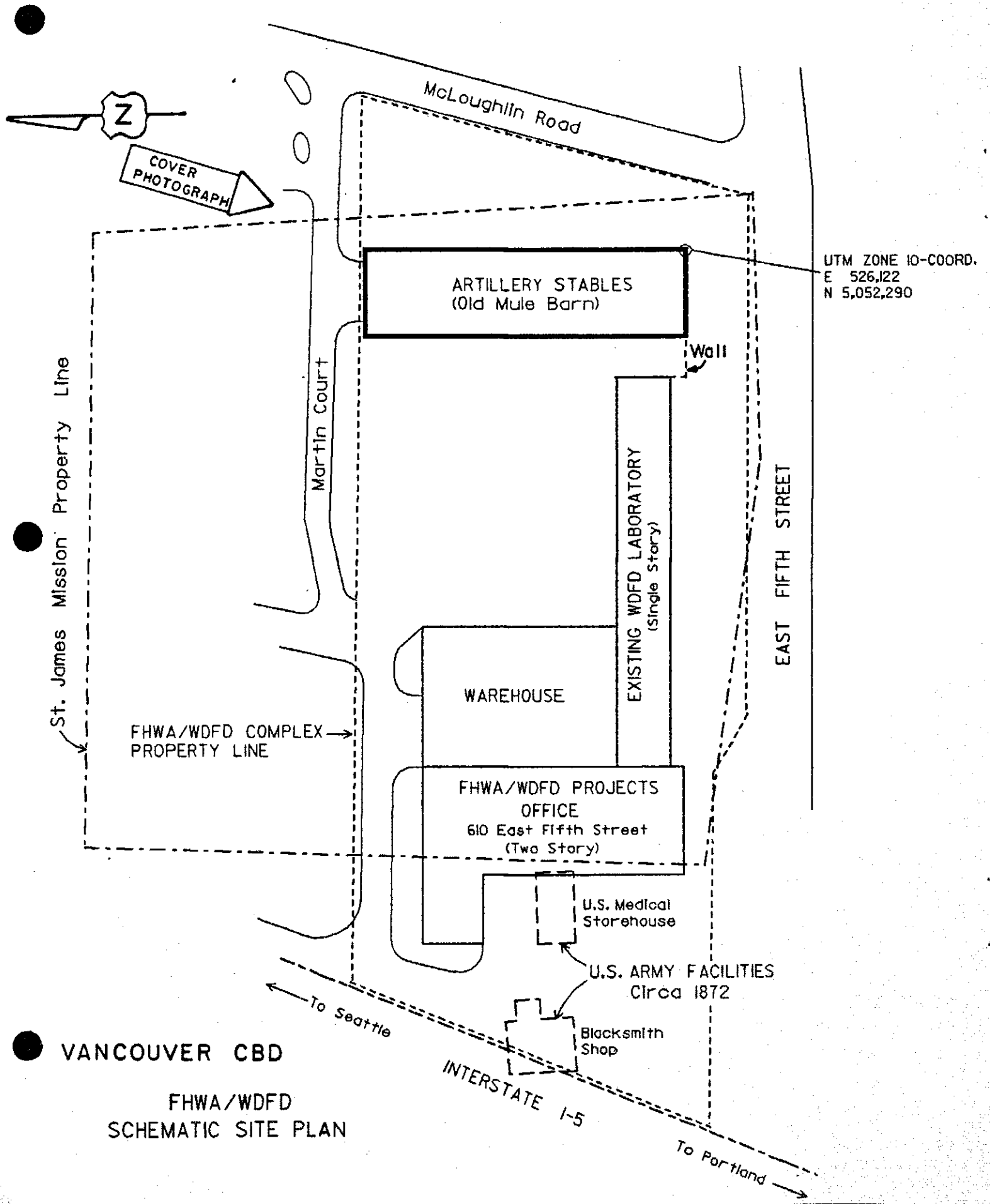
There are no likely sources of information concerning this structure remaining to be investigated and no additional material will supplement this report.

Prepared by: Melvin D. Replogle
Engineering Tech.
Federal Highway Administration
Western Direct Federal Division
June 1985

Part IV. Project Information

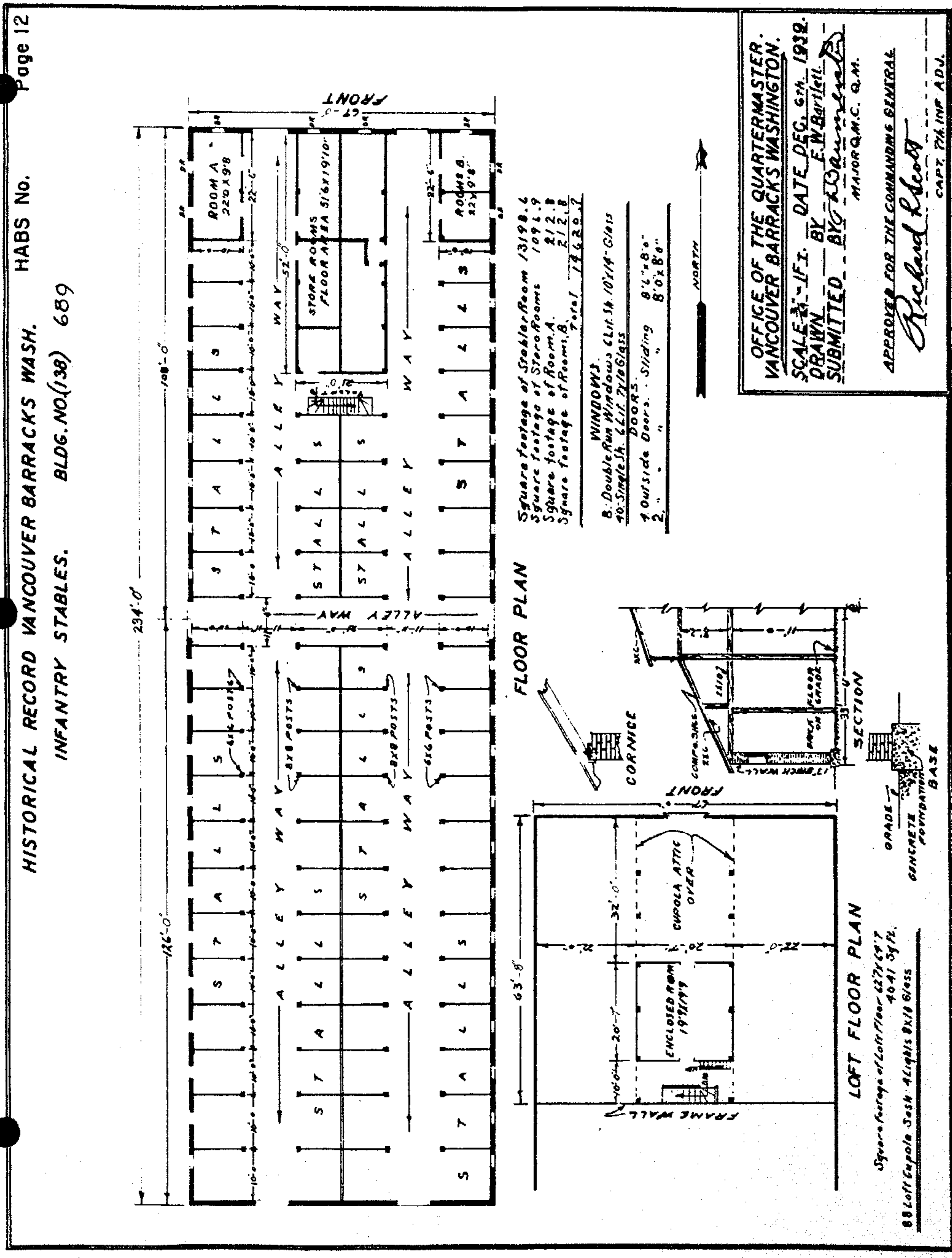
The revised floor plan, page 13, indicates the area of the stable that will be remodeled and used as a highway materials testing laboratory. This laboratory is to be a joint use facility for WDFD and the US Forest Service.

The interior will appreciably change presenting a light, airy, clean, and modern laboratory. The exterior will remain oasically unchanged. This project will help preserve an old building that has been judged eligiole for the National Register.



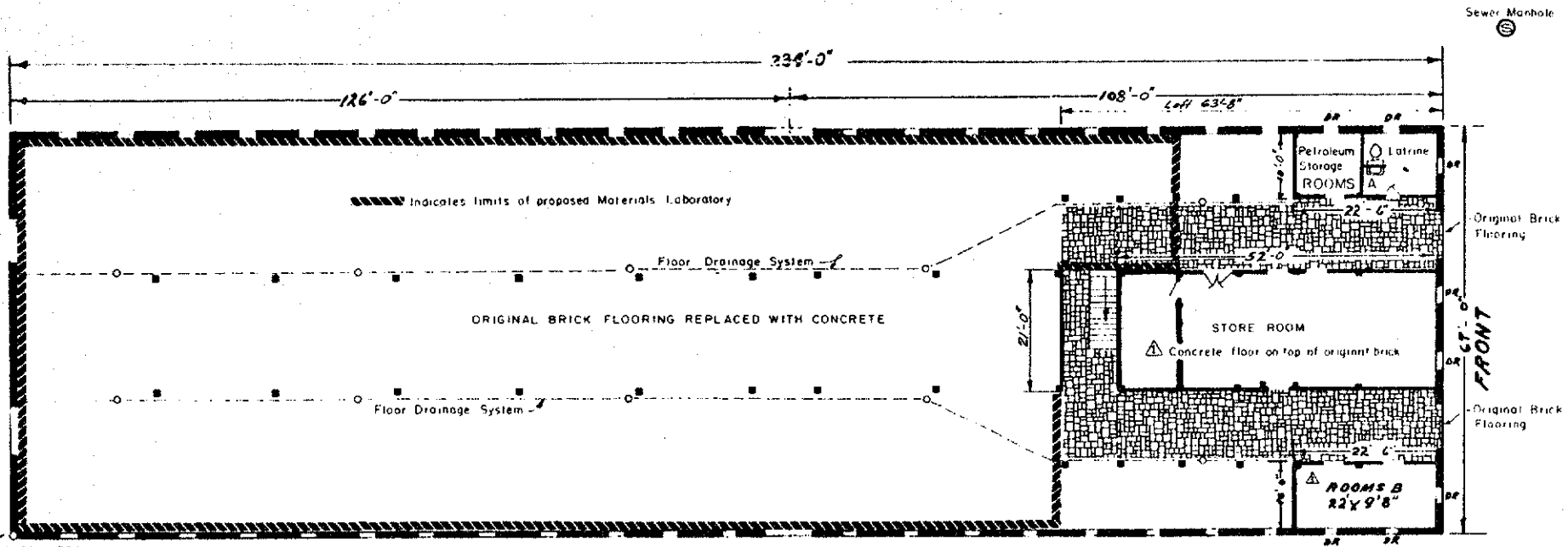
FHWA/WDFD
SCHEMATIC SITE PLAN

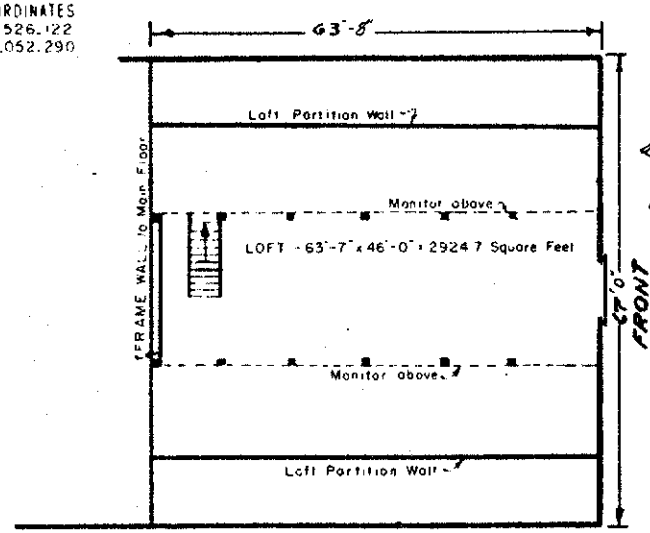
Page 3, Volume 1
THOMAS, Bryn and HIBBS, Charles, Jr.,
"REPORT OF INVESTIGATIONS OF
EXCAVATIONS AT KANAKA VILLAGE
VANCOUVER BARRACKS WASHINGTON 1980/1981"
Volumes 1 and 2
Washington Department of Trans


ARTILLERY STABLES (Old Mule Barn) Page 12
HABS No.
HISTORICAL RECORD VANCOUVER BARRACKS WASH.
BLDG. NO.(138) 689
INFANTRY STABLES.
FLOOR PLAN
FRONT
ALLEY WAY
STALLS
STORE ROOMS FLOOR AREA 51'6"X19'10"
ROOM A 22'0"X9'8"
ROOMS B 22'X9'8"
234'-0"
108'-0"
126'-0"
52'-0"
8X8 POSTS
6X6 POSTS
Square footage of Stable Room 13198.4
Square footage of Store Rooms 1091.9
Square footage of Room A 212.8
Square footage of Rooms B 212.8
Total 14620.7
WINDOWS
8 Double Run Windows 6 Lit. Sh. 10"X14" Glass
40 Single Sh. 6 Lit. 7"X10" Glass
DOORS
4 Outside Doors Sliding 8'6"x8'0"
2 " " " 8'0"x8'0"
NORTH
OFFICE OF THE QUARTERMASTER.
VANCOUVER BARRACKS WASHINGTON.
SCALE 3/64"=1FT. DATE DEC. 6th 1932.
DRAWN BY E.W. Bartlett
SUBMITTED BY
MAJOR Q.M.C. Q.M.
APPROVED FOR THE COMMANDING GENERAL
Richard Scott
CAPT. 7th INF. ADJ.
CORNICE
SECTION
BASE
GRADE
CONCRETE FOUNDATION
13 INCH WALL
BRICK ON GRADE
FLOOR ON GRADE
LOFT FLOOR PLAN
CUPOLA ATTIC OVER
ENCLOSED ROOM 19'7"X19'9"
FRAME WALL
63'-8"
32'-0"
22'-0"
20'-7"
Square footage of Loft Floor 62'7"X64'7" 4041 Sq. Ft.
88 Loft Cupola Sash 4 Lights 8X10 Glass

HISTORICAL RECORD VANCOUVER BARRACKS WASH. HABS No.

INFANTRY STABLES. BLDG. NO(138) 689





LOFT FLOOR PLAN

Square footage of Loft Floor 63'7" x 46'9"
2925 6 Sq. Ft.

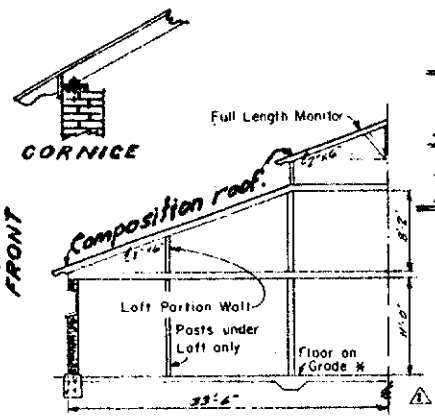
88 Loft Cupola Sash - 4 Lights 8x10 Glass

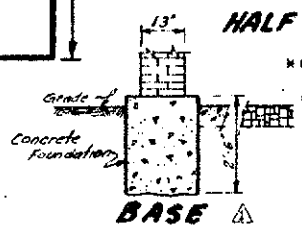
FLOOR PLAN ⚠

MAIN FLOOR - Excluding Rooms - 13,712 6 Square Feet

Rooms A	Rooms A	212.7	" "
	Rooms B	212.7	" "
	Store Room	1,021 2	" "
	Loft	2,925 6	" "
	GRAND TOTAL	18,084 8	Square Feet ⚠

Original Brick Flooring remaining in situ as of January 18, 1985 - 1,458 Sq Ft
Represents 9 6% of the original floor





* Concrete or Original Brick except for raised floor in store room (See Floor Plan above)

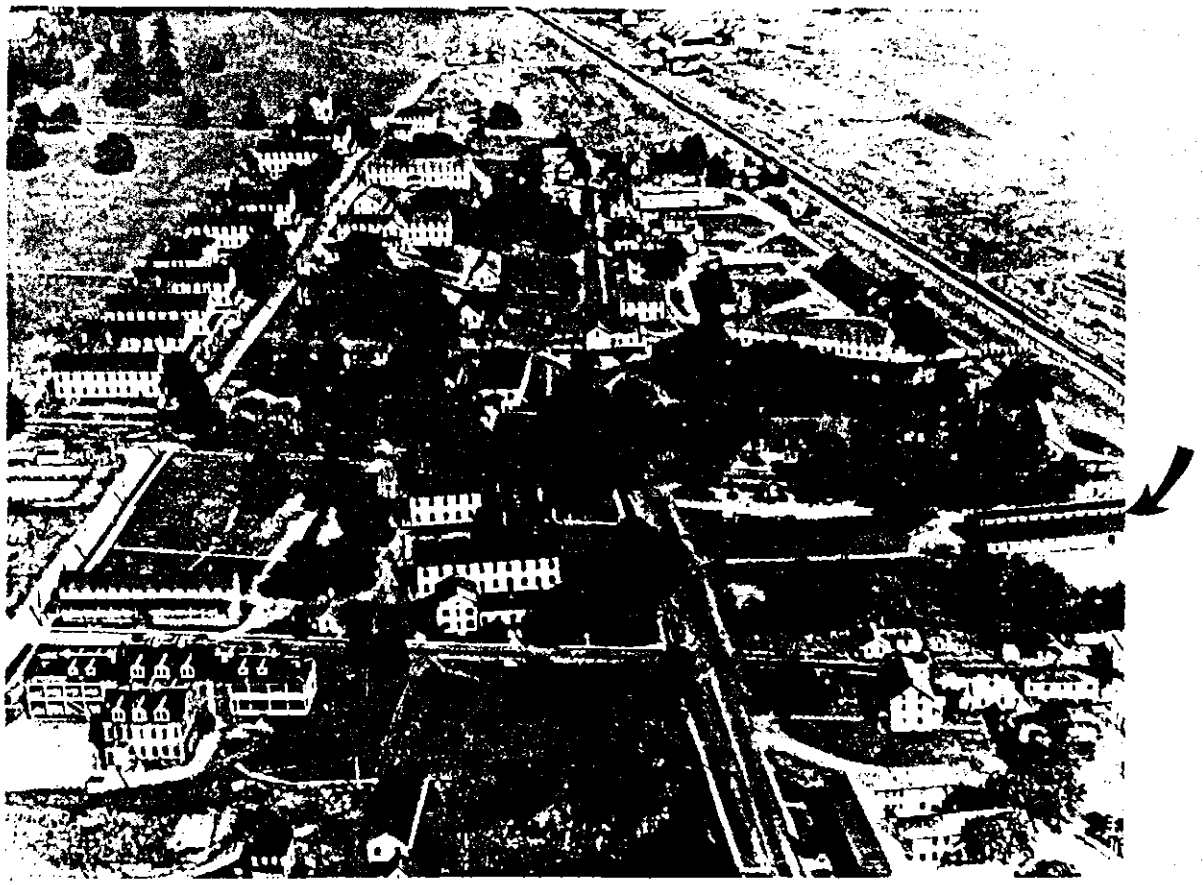
WINDOWS.
8 - Double Hung Windows 6 Lit. Sh. 10"x14" Glass
10 - Single Sh. 6 Lit. Prism Glass

DOORS.
4 Outside Doors. - Sliding 8'6" x 8'0"
2. " " " 8'0" x 8'0"

⚠ Indicates January 1985 revisions by FHWA to show modifications since 1939

OFFICE OF THE QUARTERMASTER.
VANCOUVER BARRACKS WASHINGTON.
SCALE 1/4" - 1 Ft. DATE DEC. 6th. 1939.
DRAWN BY E.W. Bartlett.
SUBMITTED BY L. Baumeister
MAJOR Q.M.C. Q.M.

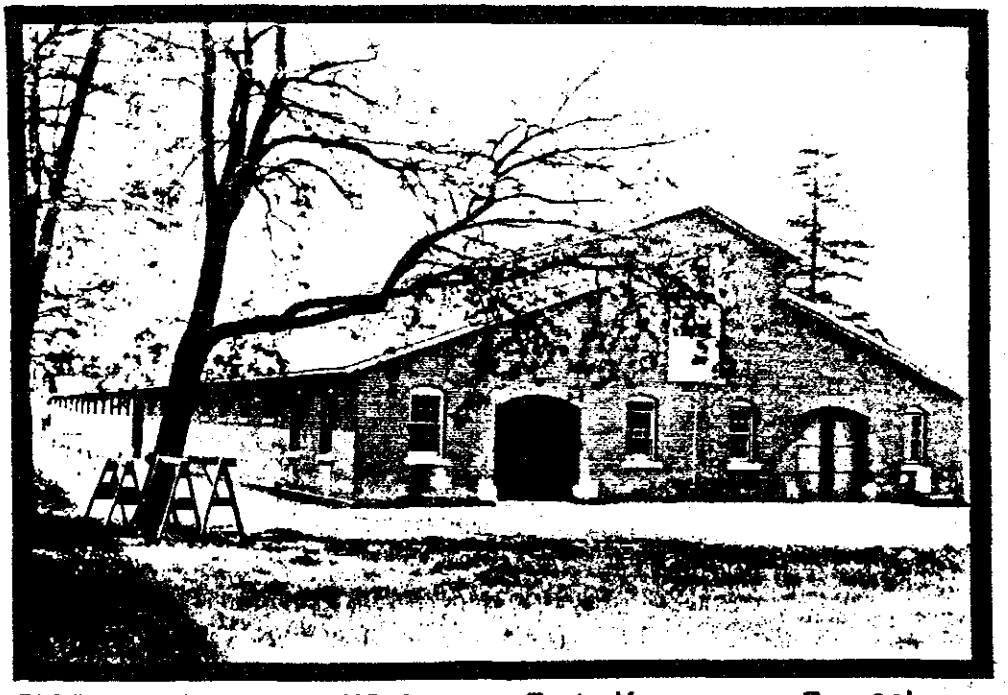
APPROVED FOR THE COMMANDING GENERAL
Richard L. Scott
CAPT. 7TH. INF. ADJ.



Vancouver Barracks May 20, 1934

Aerial Photographer: Jack Sholkoff
Pilot: Kyle L. Rose
Oregon Historical Society Negative - 409-2 OR HI 24486

The Artillery Stable is on the right edge of the photograph.



PICTURE SOURCE US Army, Fort Vancouver Barracks

CIRCA 1930 NORTH END OF STABLES LOOKING SOUTHWESTERLY.

Site determined eligible for the National Register, on March 1, 1985

This structure, completed on October 31, 1910, at a cost of $21,287, is to be renovated to accommodate a highway materials testing laboratory for use by Region 6 of the Forest Service and the Western Direct Federal Division of the Federal Highway Administration.